

WHAT IS CLAIMED IS:

1. A security system comprising:

a video mobile phone having a security function for capturing external images,

5 determining changes from previous external images, and transmitting alarm control signals and alarm video frames responsive to the determined changes;

an alarm generator in signal communication with the video mobile phone for receiving the alarm control signals from the video mobile phone and generating an alarm; and

10 an alarm video storage device in signal communication with the video mobile phone for receiving and storing the alarm video frames transmitted from the video mobile phone.

2. The security system of claim 1, wherein the video mobile phone

15 comprises:

a video input device for capturing and inputting external images into the video mobile phone;

a video processor for comparing video frames inputted from the video input device to generate result values and compressing the alarm video frames according to control signals; and

an alarm controller for generating control signals to control the alarm according to the result values generated by the video processor.

3. The security system of claim 2, wherein the video processor comprises:

a video storage device for storing at least one of captured video frames inputted from the video input device and sampled video frames;

a video comparator for comparing the video frames stored in the video storage device to generate result values; and

a video converter for compressing and transmitting the video frames according to control signals from the alarm generator.

4. The security system of claim 3, wherein the video comparator compares the sum of absolute values of differences between the pixel luminance of a current

video frame and the pixel luminance of a stored arbitrary video frame with a threshold value defined by an user, thereby generating result values.

5. The security system of claim 2, wherein the video processor comprises:

5 a video converter for converting the inputted video to generate alarm video according to control signals from an alarm controller and decoding the converted video frames;

a compressed video generator for generating compressed video with video signals generated during decoding by the video converter; and

10 a video comparator for comparing the compressed video to generate the result values.

6. The security system of claim 5, wherein the compressed video is produced with a DC coefficient selected from the decoding and a motion vector.

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7. The security system of claim 5, wherein the video comparator compares the sum of absolute values of differences between the pixel luminance of a current

video frame and the pixel luminance of a stored arbitrary video frame with a threshold value defined by an user, thereby generating result values.

8. A method of securing using a video mobile phone having a securing

5 function, comprising the steps of:

a) setting a security mode and a threshold value with the securing function as a basis for determining whether there is motion relative to the video mobile phone;

b) inputting external images captured with a camera of the video mobile phone into the video mobile phone in the set security mode;

10 c) processing video frames for at least one of compressing and storing the inputted video frames and comparing the video frames to generate result values;

d) signaling an alarm according to a result of comparing the video frame; and

f) transmitting the alarm video frames inputted to the video mobile phone to a storage device.

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9. The method of claim 8, wherein step c) compares the sum of absolute values of differences between the pixel luminance of a current video frame and the

pixel luminance of a stored arbitrary video frame with a threshold value defined by a user, thereby generating result values.

10. The method of claim 9, wherein the video frames are originally captured
5 images.

11. The method of claim 9, wherein the video frames are image frames
obtained by sampling originally captured images.

10 12. The method of claim 9, wherein the video frames are image frames
compressed from originally captured images.

13. A security system comprising:
a video mobile phone;
15 an alarm video storage device in signal communication with the video mobile
phone; and
an alarm generator in signal communication with the video mobile phone.

14. A security system as defined in Claim 13, further comprising a program storage device defining program steps for:

setting a security mode;

5 receiving video frames responsive to the set security mode;

at least one of comparing and processing the received video frames;

detecting movements responsive to the received video frames;

signaling an alarm responsive to the detected movements; and

storing received video frames relevant to the signaled alarm.

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15. A security system as defined in Claim 13, the video mobile phone comprising:

a video input device;

a video processor in signal communication with the video input device; and

15 an alarm controller in signal communication between the video processor and the alarm generator.

16. A security system as defined in Claim 15, the video processor

comprising:

first and second input terminals;

a video converter in signal communication with the first and second input

5 terminals;

a video storage device in signal communication with at least one of the first
and second input terminals; and

a video comparator in signal communication with the video storage device.

10 17. A security system as defined in Claim 16, the video converter

comprising:

a variable length decoder;

a motion compensator in signal communication with the variable length
decoder;

15 an inverse quantization unit in signal communication with the variable length
decoder;

an inverse discrete cosine transformer in signal communication with the
inverse quantization unit; and

a summing unit in signal communication with the inverse discrete cosine
transformer and the motion compensator.

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18. A security system as defined in Claim 15, the video processor
comprising:

a video converter;

a compressed video generator in signal communication with the video

10 converter; and

a video comparator in signal communication with the compressed video
generator.

19. A security system as defined in Claim 18, the video converter

15 comprising:

a variable length decoder;

a motion compensator in signal communication with the variable length

decoder;

an inverse quantization unit in signal communication with the variable length

decoder;

5 an inverse discrete cosine transformer in signal communication with the

inverse quantization unit; and

a summing unit in signal communication with the inverse discrete cosine

transformer and the motion compensator.

10 20. A security system as defined in Claim 19 wherein the compressed video
generator is in signal communication with the variable length decoder and the inverse
quantization unit.